

Morro Bay Energy Storage Project



February 2021

VISTRA: ABOUT



Vistra is a leading integrated retail electricity and power generation company operating in 20 states and the District of Columbia, including six of the seven competitive wholesale markets in the U.S. and retail markets in Canada and Japan

GENERATION

- ▶ Largest competitive power generator in the US with a capacity of ~39,000 MWs, enough to power 20 million homes
- ▶ Diverse portfolio of assets, including natural gas, nuclear, solar and battery energy storage facilities
- ▶ >90% of generation from low-to-no carbon emitting resources by 2030

RETAIL

- ▶ Serves ~4.3 million residential, commercial, and industrial customers via multiple brands in 19 states and the District of Columbia
- ▶ ~108 TWhs of load delivered annually
- ▶ Offers over 50 renewable energy and conservation-focused plans



Vistra is committed to lead in the global effort to reduce greenhouse gas emissions, promoting change through both action and advocacy while prioritizing transparent disclosures

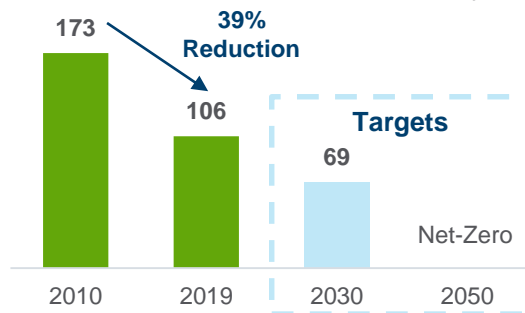
COMMITMENT TO CLIMATE CHANGE

GHG Emissions Reduction Targets



2030: 60% reduction vs. 2010 baseline

2050: Net-Zero Carbon Emissions by 2050¹



Transition to Zero-Carbon Generation

~4,000 MW of zero-carbon generation online or under development; ~9,000 MWs by 2030

~7,500 MW of coal fueled power plants expected to retire by 2027 for a total of ~20,000 MW of retirements since 2010



Green Products



Vistra Retail offers more than 50 renewable electricity plans

ADVOCACY

- Advocates for action in response to climate change, supporting an economy-wide, **adequately priced carbon fee and dividend plan** with a border carbon adjustment
- Supports legislation to facilitate **transition of coal to renewables and storage**



TRANSPARENCY

- 2019 [Sustainability Report](#) (GRI, SASB, UN SDGs)
- [Climate Report](#) (TCFD)
- 2020 [CDP](#) questionnaire

AWARDS



2020 TxN 20 Honoree by [Texan by Nature](#)

¹ Assuming necessary advancements in technology and supportive market constructs and public policy.

CORPORATE ACTION



Helping an average of 20,000 customers each year with electricity bill-payment assistance, **TXU Energy Aid** has provided more than **\$120 million** over 35 years in assistance to over 520,000 Texans



Driven by a mission to change the lives of people in need by fighting hunger in America, **Ambit Cares** is a supporting partner of Feeding America®, the nation's largest organization dedicated to fighting domestic hunger through a network of food banks



Vistra Retail brand, **4Change Energy** was founded on the idea that electricity should be affordable and contribute to where its customers live contributing **4% of its profits** to Texas charities

COMMUNITY GIVING

- Committed **\$10 million** over the next five years to support the advancement of business and education in diverse communities
- Donated **>\$2.1 million** to non-profit organizations in 2020, including funds allocated to our >50 power plants across the U.S., empowering our employees to direct funding in local communities
- Raised nearly **\$2 million** in annual 2020 United Way and TXU Energy Aid giving campaign
- Volunteered nearly **1,000 hours** in 2020

PEOPLE

Pursue a Just Transition

- Minimize the social impacts from closures of power plants
 - For local communities:** Propose tax plans to cushion near-term impact and support legislation to redevelop sites into renewable and battery facilities
 - For employees:** Provide robust severance, outplacement services, and job skills training

Employee and Contractor Safety



BEST DEFENSE

To protect **Vistra's No. 1 asset – our people** – our Company-wide safety program, Best Defense, focuses on high-risk activities and adds defenses to ensure that if we fail, we do so safely

AWARDS



Hopewell Power Plant recognized as Voluntary Protection Program (VPP) Star facility by the Virginia Department of Labor and Industry;
12 facilities with VPP Star Rating



Sentinels of Safety awarded to Kosse Mine



Dallas/Fort Worth Minority Supplier Development Council (DFWMSDC) **2020 Corporation of the Year**

BRANDS IN CALIFORNIA



AMBIT
ENERGY™

Energy
Rewards™

LOCATIONS

Oakland

165 MW oil (RMR) *to be retired*
36.25 MW battery (construction)

Moss Landing

1,020 MW natural gas
300 MW battery
100 MW battery (construction)

Morro Bay

600 MW battery (proposed)

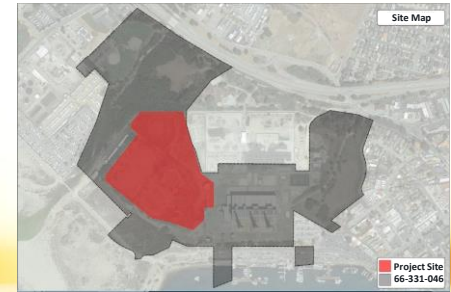
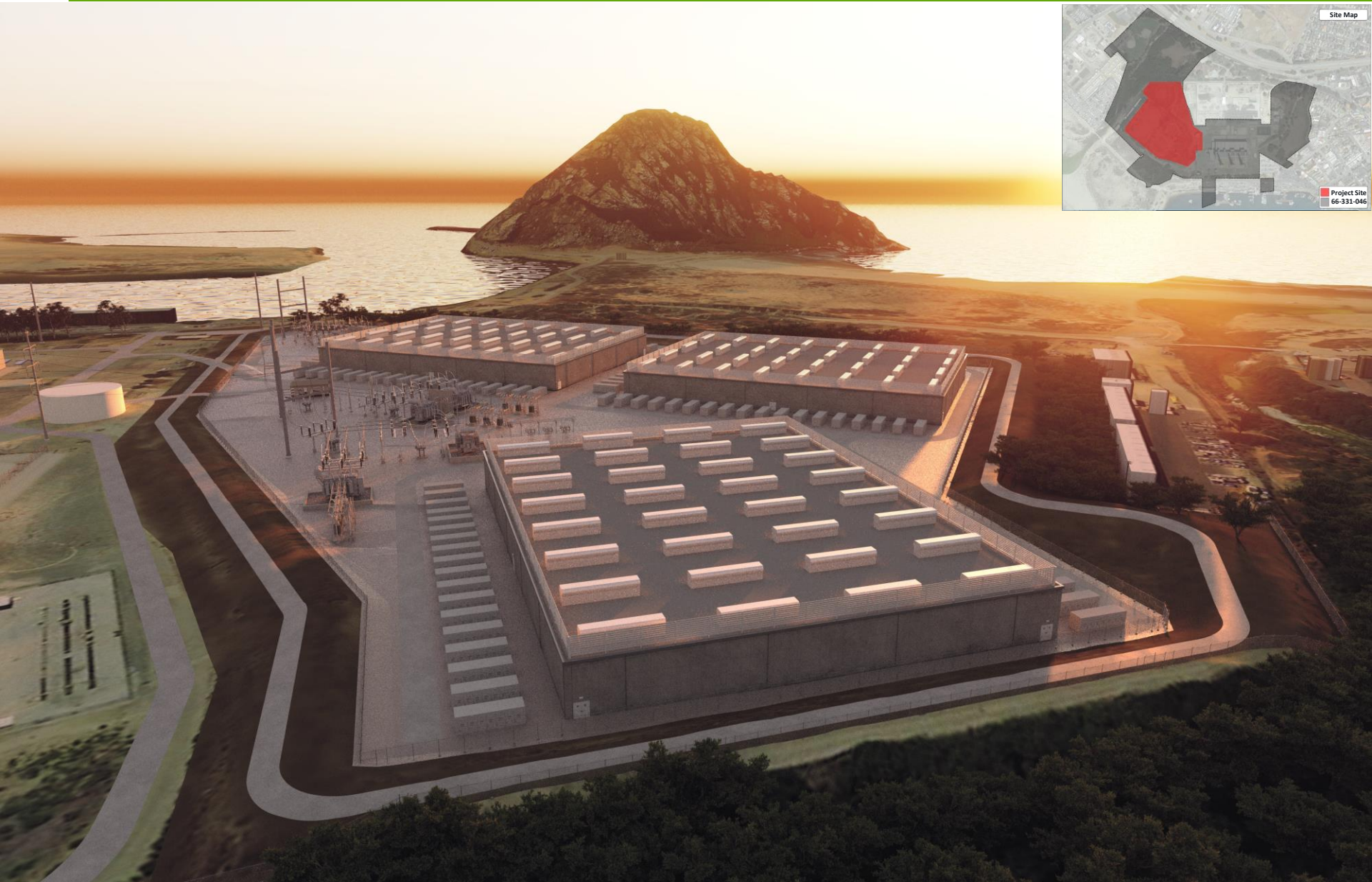
COMMUNITY COMMITMENT

Our family of companies is proud to support the communities where our employees and customers live, work, and grow. We take pride in being a good neighbor and strengthening the places where we have customers, where our valued employees live, and where we call home.



Morro Bay Power Plant: Battery Project Proposal

Morro Bay Power Plant: Battery Project



Morro Bay Power Plant: Battery Project



Power Plant Stats:

- 600 MW / 2,400 MWh of Lithium-ion Batteries
- Power About 450,000 Homes
- Project will occupy 22 acres
- New Buildings add up to 273,000 square feet

Timing:

- The project is anticipated to commence construction in 2022 and last for 36-48 months.

Community Benefit Investments:

- Guided by the Vistra Corporate Giving Policy, we address community needs through investments that provide meaningful, direct, and sustainable social benefit and align with our business priorities.

Tax revenues at full buildout:

- Est. \$4.8M total annual property tax payment to San Luis Obispo County, assuming a significant capex investment ranging from \$500-600 million, which is reasonable for this stage of the project's evaluation, we might anticipate a taxable value of ~\$450M.

Employment

- Peak: 300 construction workers are expected to be onsite during the peak
- Average: 100 construction workers are expected to be onsite throughout the duration of the project
- Operations: 15 permanent employees
- Workforce is expected to come from the local area
- We anticipate increases in local business revenues given the size and duration of the construction work force

HOW IT WORKS



Renewable Solar and Wind Energy



ENERGY IN

Excess green energy comes in and charges utility-scale batteries



Morro Bay Energy Storage Facility

Batteries store excess renewable energy until it is needed



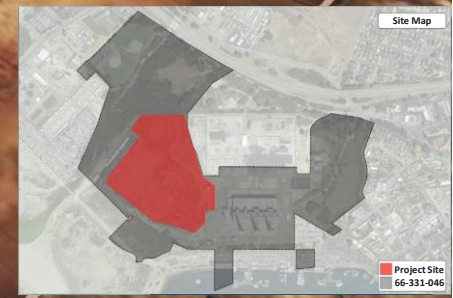
ENERGY OUT

Batteries release the stored renewable energy when demand is highest, increasing grid reliability and maximizing the use of zero-carbon energy

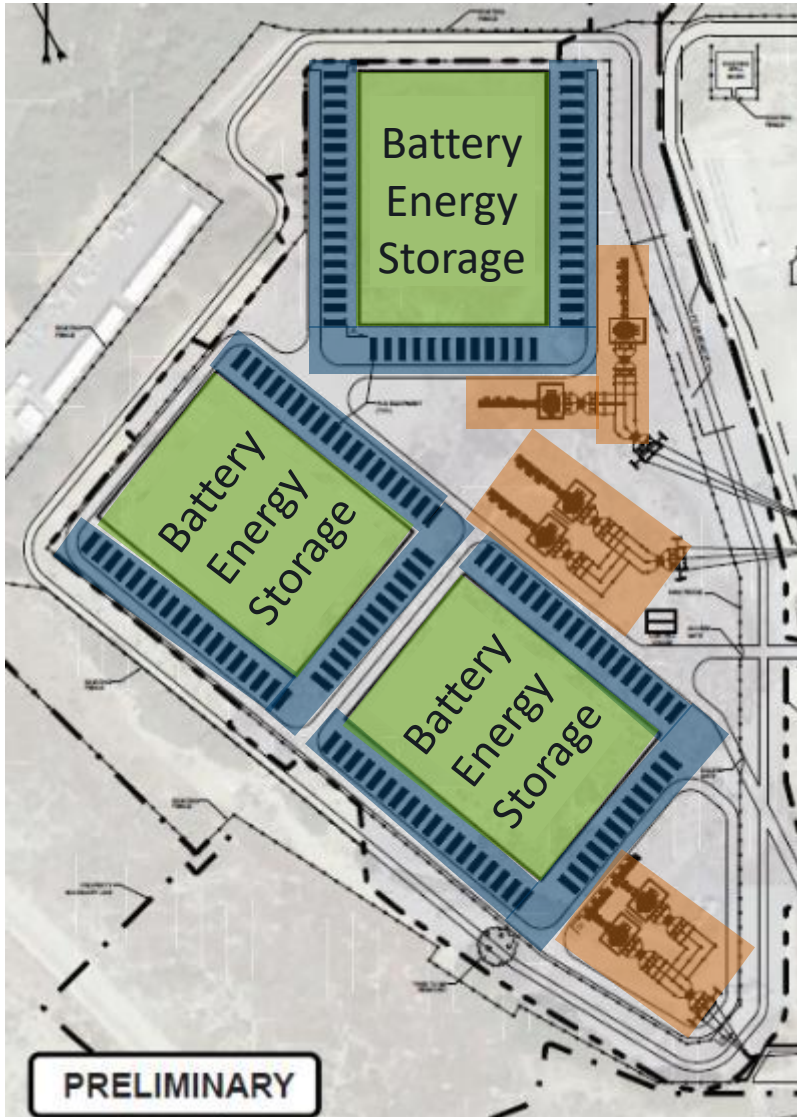


About 450,000 Homes Powered

Morro Bay Power Plant: Battery Project



Morro Bay Power Plant: Battery Project



Battery
Energy
Storage



Power
Conversion
System



Substation



Morro Bay Power Plant: Battery Project



- **Battery Energy Storage:** Three enclosed buildings with fire protection systems to house the batteries.
 - Each low-profile building would be 30 feet high, 350 feet long and 260 feet wide or 91,000 square feet (total for all three buildings of 273,000 square feet)
 - Each 30-foot building will have up to 10 feet of equipment on the roof. Such equipment, if required, would be screened
 - Each building would contain approximately 2,400 battery racks
- **Power Conversion System:** Each building will be surrounded by approximately 60 Power Conversion Systems (PCS) to convert the direct current to alternating current.
 - The PCS is composed of inverters and transformers located on concrete pads outside each of the buildings
- **Substation:** Three substations with transformers; and
- **Safety:** The proposed battery buildings would not be occupied; however, personnel will be required to access the batteries for maintenance. Therefore, the project will incorporate a multi-tiered safety system consisting of passive design considerations, monitoring, automatic, and manual protection systems. These systems will be designed based on industrial best practices in consultation with the Morro Bay Fire Department.
- **Other:** Access roads; water supply system improvements; and infrastructure to support interconnection at the existing, adjacent PG&E switchyard.
- **Timing:** The current plan would be to have the facility online by the end of 2024 when the first unit of the Diablo Canyon Nuclear Generation Station goes offline.

THANK YOU!

Appendix:

Moss Landing Energy Storage



SAN FRANCISCO
⚡ MOSS LANDING

LOS ANGELES

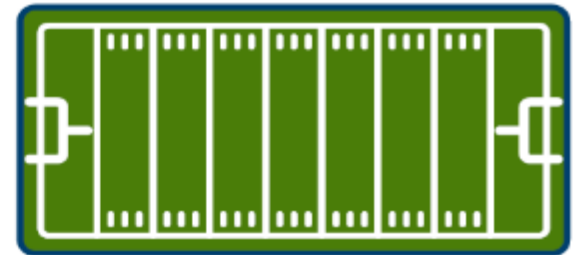
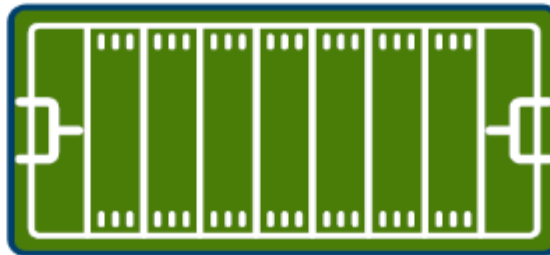
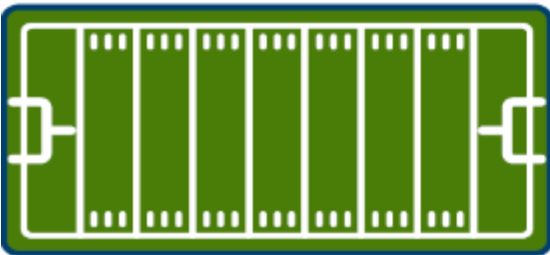
Moss Landing Energy Storage

Largest Energy Storage System in the World

Moss Landing Energy Storage



The massive battery building is **nearly three football fields long!**



Moss Landing Energy Storage



Over **500,000 feet** of wires and cables are used in the battery system.
That's about the distance from Philadelphia to New York



Moss Landing Energy Storage

VistraZero Moss Landing Energy Storage Facility

300 MW/1,200 MWh Largest Energy Storage System in the World



**enough
to power
225,000 x**



Each battery cabinet, known as a rack, holds 22 individual battery modules.



3x

Laid end to end, the 4,539 battery racks would span nearly 5 miles – about 3x the length of the Golden Gate Bridge.

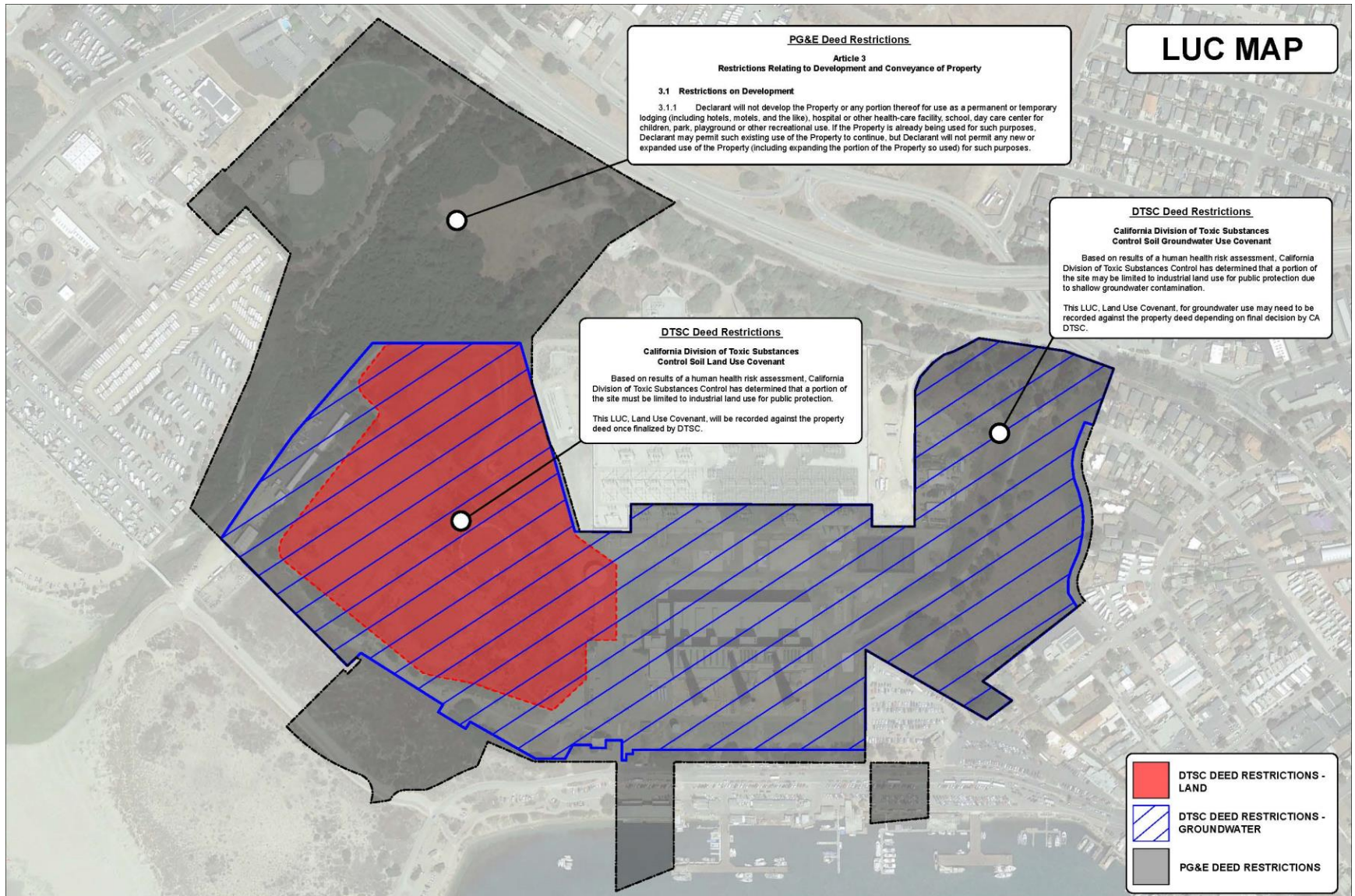
At nearly 5,200 lbs. each, the 4,539 racks collectively weigh about the same as



2,300 5-ton elephants!

Appendix: Real Estate

Morro Bay Power Plant: Land Use Restrictions



- **PG&E Deed Restrictions**

- When PGE sold the power plant site in 1998, they recorded a limited use covenant against the property that covers the entire Morro Bay power plant site.
- The restriction limitations are shown below:

Article 3

Restrictions Relating to Development and Conveyance of Property

3.1 Restrictions on Development

3.1.1 Declarant will not develop the Property or any portion thereof for use as a permanent or temporary lodging (including hotels, motels, and the like), hospital or other health-care facility, school, day care center for children, park, playground or other recreational use. If the Property is already being used for such purposes, Declarant may permit such existing use of the Property to continue, but Declarant will not permit any new or expanded use of the Property (including expanding the portion of the Property so used) for such purposes.

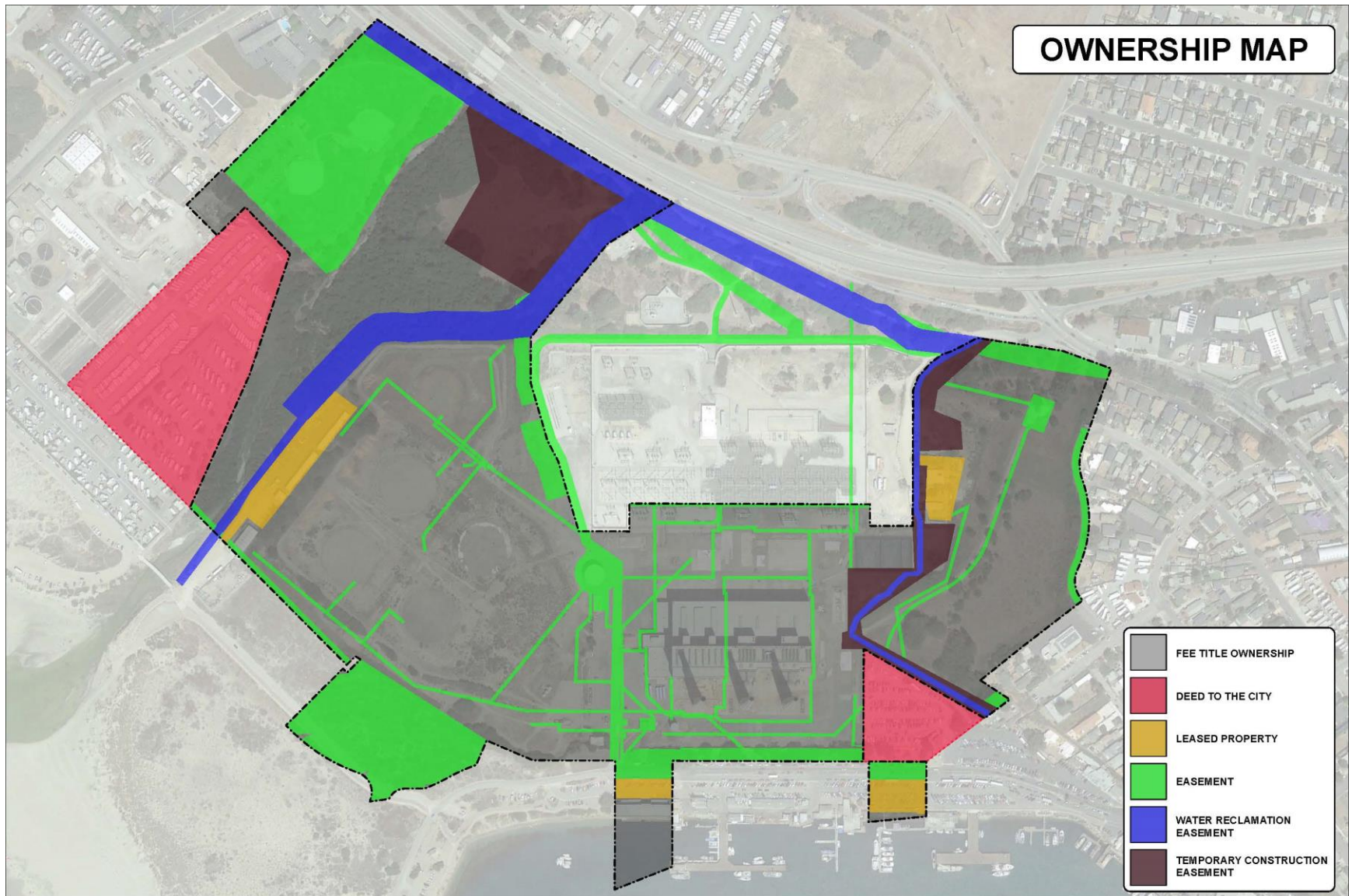
- **DTSC Deed Restrictions –Groundwater Use Covenant**

- Based on results of a human health risk assessment, California Department of Toxic Substances Control (DTSC) has determined that a portion of the site may be limited to industrial land use for public protection due to shallow groundwater contamination.
- This DTSC review is ongoing and the final Land Use Covenant, for groundwater use would be recorded against the property deed.

- **DTSC Deed Restriction – Soil Land Use Covenant**

- Based on results of a human health risk assessment, California Department of Toxic Substances Control (DTSC) has determined that a portion of the site, may to be limited to industrial land use.
- The DTSC review is ongoing and the final Land Use Covenant, would be recorded against the property deed.

Morro Bay Power Plant: Ownership Map



Morro Bay Power Plant: Ownership Map (cont.)

- The Morro Bay Power Plant is located at 1290 Embarcadero (APN 066-331-046) and is approximately 107 acres.
- Through various agreements with the City and others, access, easements, temporary use and even transfers of the property have occurred. Here is a list of those transaction that are show on the map:
 - City's Lila Kaiser park
 - City's RV Park
 - City's Fisherman's storage and boathouse
 - City's Embarcadero multi purpose path easement
 - City's Embarcadero Street easement
 - City's Embarcadero free parking lot lease
 - City's parking lot where the maritime museum is located
 - City's boardwalk easement
 - City's easement for Scott Street
 - City's easement for sewer pipes
 - City's bike path and sewer pipeline easement
 - Eminent Domain
 - City's pipeline and injection well easement
 - City's temporary construction easement
 - Morro Bay Mutual Water Company (co-owned w/ PG&E)
 - Pacific Wildcare and Marine Mammal Center